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New Lancet study shows India sitting on obesity curve

#Obesity #Underweight #Malnutrition #LancetStudy #HealthIssue #ScienceandTechnology #GS3

India could be facing an obesity epidemic with alarm bells ringing particularly for the young. A new global analysis, published by The Lancet, found that 12.5 million children (7.3 million boys and 5.2 million girls) in the country, aged between five and 19, were grossly overweight in 2022, up from 0.4 million in 1990.

The report showed more than three per cent prevalence among children and teens, an increase of over three percentage points from 1990.

Obesity is also a concern among adults, with female obesity prevalence increasing sharply — women had a 9.8 per cent prevalence, an increase of 8.6 percentage points from 1990. For men, this number stood at 5.4 per cent, an increase of 4.9 percentage points.

Obesity, as defined by the World Health Organisation (WHO), is an abnormal or excessive accumulation of fat that poses health risks. A body mass index (BMI) over 25 is considered overweight and over 30 is obese.

Why is this study relevant for India?

The new study reveals that 44 million women and 26 million men aged above 20 in India were found to be obese, this figure being 2.4 million women and 1.1 million men in 1990.

India ranks 182 among 197 countries for the prevalence of obesity in women and 180 for men in 2022. The country ranked 174 in the world for both girls and boys.

This finding is significant at a time when India already has a high burden of non-communicable diseases — heart disease, strokes, and diabetes topping them. Obesity is a major risk factor and a trigger for early onset of these diseases, even Type 2 diabetes among teens.

What's driving obesity across age groups?

The primary drivers of the obesity epidemic in India — A shift in dietary choices away from traditional foods and physical inactivity. We have shifted away from whole foods such as pulses, whole grains, fruits, and vegetables. Our traditional food was low on animal products, salt, refined oils, sugars and flours but we have now moved towards a diet that is high in energy but low in nutrients — refined carbohydrates, high fat, meat products, and processed foods. In addition, a range of behavioural factors could also have a potential effect on obesity among children.

Double Trouble

The study also flags severe under-nutrition in the country among all age groups. India ranks the highest in the world for underweight girls and the second highest for boys. In India, about 35

million girls and 42 million boys between five and 19 years were underweight in 2022, compared to 39 million girls and 70 million boys in 1990 (a seven-percentage-point dip for girls and a 23-percentage-point dip for boys). **Among adults too, 61 million women and 58 million men were underweight in 2022**, a drop from 41.7 per cent in 1990 to 13.7 per cent for women and 39.8 per cent to 12.5 per cent for men.

Obesity and being underweight are both forms of malnutrition. These two divergent peaks show that India has a double burden of both thinness and obesity, which remains a significant health challenge in the country.

To successfully tackle both forms of malnutrition, it is vital we significantly improve the availability and affordability of healthy, nutritious foods.

Can we reverse these trends?

Experts say these trends can, however, be reversed with targeted interventions. Eating behaviour involves snacking, patterns of restrained eating, dieting, binge eating and dining out. **Consumption of added sugars plays a significant role in driving obesity, particularly when ingested through beverages like sodas, sweetened coffee, tea and juices.**

Addressing obesity in adolescents requires a multi-faceted approach that involves government policy, community initiatives and individual actions. At least 60 minutes of physical activity per day is recommended to be fit and healthy. The sale of unhealthy foods and beverages to children, restricting junk food advertisements targeted at children, clear nutritional labelling and promoting healthier options at school cafeterias are a must.

Parents should also involve children in their daily household chores. Children are spending their time sitting for long hours at school, returning by bus/car/auto/scooter/van, spending time in front of TV /and playing with gadgets at home. They need to eat healthy food and regularly go for a health screening.

Why under-nutrition remains a challenge?

Maternal malnutrition is the key reason. More than half of pregnant women suffer from micronutrient deficiencies like those of iron and vitamin B12. The Lancet Food Commission, NFHS surveys and national comprehensive nutrition surveys among others have shown that dietary diversification is very poor among children. The school and college curriculum can include more chapters on nutrition, healthy eating habits, healthy food consumption, and increased physical activities like sports and games.

Why are obesity levels rising faster in women?

Women in more traditional settings may face more barriers to accessing physical activity, **have limited access to healthy food options** or may be **subject to dietary practices that prioritise the nutritional needs of other family members over their own.**

They have **limited access to healthcare and education about obesity**, its health implications and healthy lifestyle choices.

In addition, **biological factors, including pregnancy and menopause**, uniquely affect women's weight.

It is necessary to educate women at a community level on the importance of maintaining a healthy weight which will stem from practising a healthy lifestyle.

Sedentary lifestyles have gone up significantly over four decades. The National Nutrition Monitoring Bureau diet and nutrition surveys in rural areas carried out in different periods (decadal surveys) have shown that the sedentary activity had significantly increased from 34 per cent in 1975-79 to 74 per cent by 2012. This could be the major contributing factor for the high prevalence of obesity in India.

Patanjali controversy and the lure of a magic cure

**#PatanjaliAyurveda #MisleadingAdvertisement #ASUmedicines #Classicalmedicines
#P&Pmedicines #AYUSH #Governance #GS2**

There is something deeply disturbing about the way the marketing and sale of Ayurveda, Siddha and Unani (ASU) medicine is going on. In November 2023, the Supreme Court had given directions to Patanjali Ayurveda to stop publishing misleading advertisements but a day later, to establish its credibility, the company issued a press release reporting that it has conducted preclinical and clinical trials on a database of more than one crore people, to test the efficacy of its products.

Earlier this week, the matter came up again before the apex court, which took umbrage at the continued issue of advertisements despite having been given an assurance.

Advertising drugs purported to treat or cure certain diseases is prohibited under DMR, that is, the Drugs and Magic Remedies (Objectionable Advertisements) Act 1954, which applies to all systems of medicine. Promoting drugs intended for the treatment and cure of 54 specific medical conditions, which include cancer, diabetes, heart disease and blood pressure, is explicitly barred.

For decades, the prohibitions under the DMR Act have been more flouted rather than respected. Seeing countless advertisements for treating and curing any number of conditions displayed in newspapers, and the electronic media, consumers have become inured to risks. Even as the claims are made with growing impunity, no visible action seems to have been taken by the state governments to whom the Ministry of Ayush has sent hundreds of complaints. **The regulatory watchdog, Advertising Standards Council of India, has failed to take effective cognisance or to set guidelines.**

The extant case is against Patanjali, but the ramifications raise broader issues. **The Drugs and Cosmetics (D&C) Act was enacted in 1940 and a new Chapter IV A was introduced in 1964 for ASU medicine. The difference between classical medicine and patent and proprietary medicine is explained there.**

Classical ASU medicine refers to drugs that are manufactured strictly in accordance with the authoritative ancient texts (granthas or samhitas) listed under the D&C Act.

Patent and Proprietary (P&P) medicine refers to manufacture of ASU drugs by modifying the classical recipe and introducing new combinations. For this category, **the efficacy and safety of the medicine is required to be proven by following the Good Clinical Practice Guidelines issued by the Ministry of Ayush — to document evidence of safe and effective use.**

A large proportion of P&P medicine professes to treat new conditions that aren't mentioned in the ancient texts — for instance, fits, heart disease, hypertension, obesity, or cancer, to name a few.

To obtain a manufacturing licence, citing scientific sources is essential and if unavailable, pre-clinical or clinical trials are required to be held along with clinical data as stipulated. During Covid, the Ayush Ministry had mandated the registration of all medical research projects with the Indian Council of Medical Research's CTRI — Clinical Trials Registry of India database — which has been established to cover medical research involving human subjects — without distinction between allopathic or ASU research. The objective was to promote evidence-based clinical practice to ensure

patient safety. Not only Patanjali, but several others too have been proactively promoting their P&P drugs but whether they have complied with CTRI requirements is unclear.

The DMR Act was enacted to control misleading claims and advertisements involving medicinal substances and products. Whether the products have been licensed or not, whether they are evidence-based or otherwise, whether R&D has been done, goes beyond the ambit of DMR. The news about Patanjali which has been flashed countrywide is disturbing because it highlights the vulnerability of the consumer who assumes that some regulatory body would have checked that nothing unsafe, hazardous, or ineffective is sold as medicine.

In the case of ASU drugs (of which Ayurveda constitutes more than 75 per cent), there is greater danger, because the consumer assumes all products are natural and consequently safe. When she sees advertisements about efficacious treatment and cure of intractable diseases, she goes for self-medication instead of being diagnosed by a vaidya or medical practitioner, trained to diagnose the overall constitution of the individual in a holistic way. Prompted by advertisements, she purchases P&P medicine over the counter. **But unlike chemists dispensing allopathic drugs whose credentials are checked, selling ASU medicine requires no sale licence and all pharmacists, and even general stores and groceries, have the latitude to sell these drugs, possessing zero knowledge of the drug use, dosage, or ingredients — including presence of heavy metals.**

This can be dangerous, because **many ASU drugs can be unsafe if ingested through self-medication, especially by those in compromised health.** Unfortunately, the **need for a sale licence for ASU products has been negated by the Drugs Technical Advisory Board (DTAB);** likewise, the **progressive Rule 170 introduced in 2018, which required clearance of advertisements from the state licensing authority (as a preventive against misleading advertisements,) has also been nullified for now, by the DTAB.**

On implementation, however, the buck stops with the Ayush state drug controllers, and considerable patchiness exists in the way the two Drug Acts are being administered — be it licensing, quality control, enforcement or advertising. **The country needs a unified structure and system for regulating and administering the licensing, manufacture, sale, safety monitoring and drug advertising of ASU drugs when sold across states in inter-state commerce.** This will instil not just oversight of safety but will bring greater ownership among new consumers worried about quality and claims. **The vagaries of the state drugs control systems (where posts lie vacant for months or are handled by non-qualified persons and enforcement is ineffective), will otherwise take their toll.**

What are the allegations against Patanjali?

The Indian Medical Association (IMA) filed a petition at the apex court in August 2022 after Patanjali published an advertisement titled ***“MISCONCEPTIONS SPREAD BY ALLOPATHY: SAVE YOURSELF AND THE COUNTRY FROM THE MISCONCEPTIONS SPREAD BY PHARMA AND MEDICAL INDUSTRY.”***

What is the legal argument against Patanjali’s actions?

The IMA claimed that the advertisement was in **direct violation of the Drugs & Other Magical Remedies Act, 1954 (DOMA), and the Consumer Protection Act, 2019 (CPA).** The publishing of false and misleading advertisements is an offence under both statutes.

Under Section 4 of the DOMA, there is a prohibition against publishing misleading advertisements relating to a drug. This is described as an advertisement which “directly or indirectly gives a false impression regarding the true character of the drug”, “makes a false claim for the drug”, or “is otherwise false or misleading in any material particular.”

Publishing a misleading advertisement under the DOMA is punishable with up to six months imprisonment, and/or a fine for the first offence. On the second offence, the period of imprisonment can extend to one year.

The IMA has also highlighted the **Memorandum of Understanding signed by the Ministry of AYUSH and the Advertising Standards Council of India in January 2017. AYUSH, which is responsible for developing and setting medical standards for traditional medicine, agreed to identify misleading advertisements that may be in violation of the DOMA, and send complaints to the Council for review.** Despite this, the IMA claims that Patanjali has continued to disregard the law and violate the DOMA.

Section 89 of the CPA contains even more stringent punishments for false or misleading advertisements. It states: “Any manufacturer or service provider who causes a false or misleading advertisement to be made which is prejudicial to the interest of consumers shall be **punished with imprisonment for a term which may extend to two years and with fine which may extend to ten lakh rupees; and for every subsequent offence, be punished with imprisonment for a term which may extend to five years and with fine which may extend to fifty lakh rupees.**”

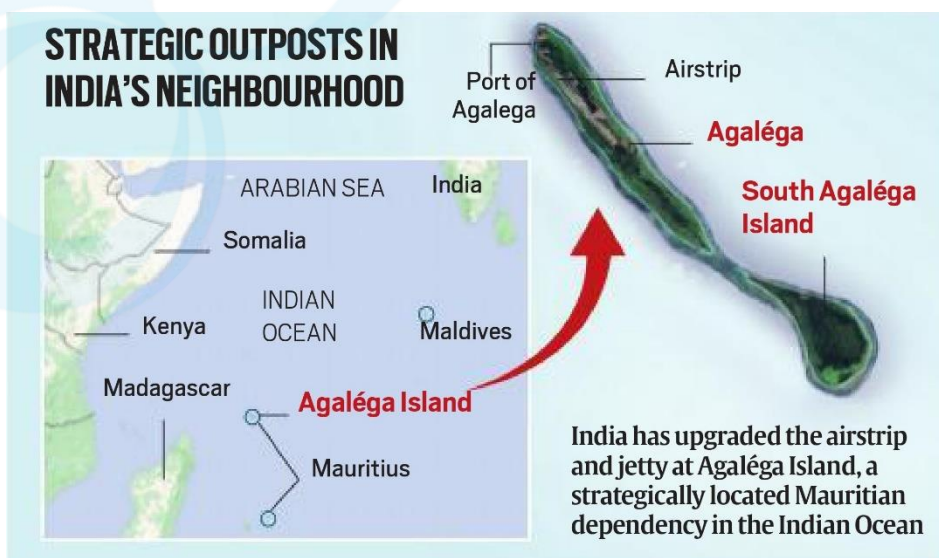
The CPA also provides the definition for a “misleading advertisement”. It includes advertisements which give a false description of the product or service, partakes in unfair trade practices, deliberately conceals important information, or is likely to mislead the consumer about the nature, substance, quantity or quality of the product or service.

India-built airstrip inaugurated in Agaléga, Mauritius

#AgalegaIsland #Mauritius #IndiaMauritiusRelations #IndiaMaldivesRelations #IndianOcean #MaritimeSecurity #StringOfPearls #InternationalRelations #GS2

Earlier this week, the first team of Indian “technical personnel” reached the Maldives to take charge of one of the three aviation platforms stationed in the country. They will replace Indian military personnel whose first batch is required to leave the islands by March 10.

On Thursday (February 29), **Prime Minister Narendra Modi and Prime Minister Pravind Jugnauth of Mauritius jointly inaugurated an airstrip and a jetty that India has built on Agaléga, a two-island Mauritian dependency 1,100 km to the north of Port Louis and 2,500 km southwest of Malé.**



As Indian Ocean outposts, **Mauritius and the Maldives have great strategic significance for India. New Delhi's maritime security and strategic imperatives in the Indian Ocean are linked to the presence and increased activities of China in the region.**

The Maldives case

Soon after coming to power in November 2023, Mohamed Muizzu, the pro-China President of the Maldives, requested India to withdraw its military personnel from his country. Muizzu had defeated the incumbent Ibrahim Mohamed Solih in the presidential election on the "India Out" plank.

Late on Monday, the Maldives defence ministry said the first team of Indian civilians had arrived, and would take charge of the operation of a helicopter in Addu, the country's southernmost atoll. The two countries had agreed on February 2 that India would pull out 80-odd military personnel stationed in the Maldives between March 10 and May 10.

The Indian Ministry of External Affairs had said that the two helicopters and a Dornier aircraft in the Maldives would be operated by "competent Indian technical personnel" who would replace the "present personnel".

The Mauritius case

Following Prime Minister Modi's visit to Mauritius in March 2015, **India signed a Memorandum of Understanding for the "improvement in sea and air transportation facilities" at Agaléga island.**

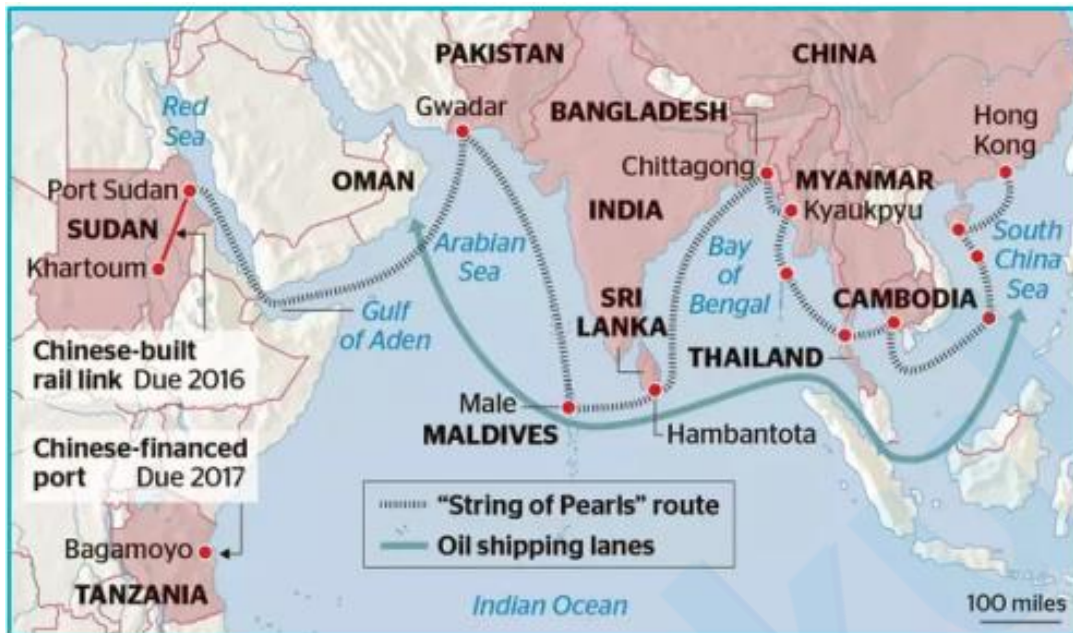
"The March 2015 MoU (to upgrade the airstrip and the Set James jetty) reflected India's commitment to continually assist Mauritius in meeting its development goals satisfying the principles of mutual benefit..." Prime Minister Jugnauth said.

The presence of India would lead to more effective monitoring of Mauritius' vast 2.3 million sq km Exclusive Economic Zone, and equip it to better counter-piracy, terrorism, narcotics and human trafficking, and illegal and unregulated fishing, Prime Minister Jugnauth said.

China in Indian Ocean

China sees great value in having a powerful presence in the Indian Ocean region. **Nine of China's top 10 crude oil suppliers transit the Indian Ocean... [which] is also the primary theatre of transit for China for engagements with Africa, Middle East, island nations, and littorals across the vast ocean.**

China is the only nation with an embassy in each of the six islands in the Indian Ocean — Sri Lanka, Maldives, Mauritius, Seychelles, Madagascar, and Comoros and none of the traditional players — the United States, the UK, India, or France have embassies on all six. Beijing had gone beyond diplomatic and trade partnerships in the region, and had begun to maintain a consistent military presence as well.



In 2017, China opened its first overseas military facility in the Indian Ocean in Djibouti on the Horn of Africa. Analysts believe that it is only a matter of time before a second Chinese military facility comes up in the Indian Ocean — whether in Pakistan, Myanmar, or the western Indian Ocean.

View from New Delhi

India sees the urgency and importance of working with the governments of all these island nations. The domestic politics of these nations often impact their behaviour and policies abroad — and India will have to manage its diplomatic relationships well while continuously pursuing its strategic interests in the region.

The Jugnauth government in Mauritius has so far been able to manage the domestic criticism of India's presence better than the Solih government was able to do in the Maldives.

PM Modi launches hydrogen-powered ferry: features, significance

[#HydrogenPoweredFerry](#) [#HydrogenFuelCell](#) [#InlandWaterways](#) [#HaritNaukaInitiative](#)
[#NationalGreenHydrogenMission](#) [#ScienceandTechnology](#) [#GS3](#)

Prime Minister Narendra Modi Wednesday virtually launched India's first indigenously developed hydrogen fuel cell ferry. The vessel, manufactured by Cochin Shipyard Limited (CSL), will be deployed for service at Varanasi in Uttar Pradesh.

Built at a cost of Rs 18 crore, the ferry will be handed over to the Inland Waterways Authority of India by the CSL after rigorous trials. The Ministry of Ports, Shipping and Waterways met 75 per cent of the project cost.

What are the special features of the vessel?

The Hydrogen fuel cell vessel is a 24-meter-long catamaran, which can carry 50 people in its air-conditioned passenger area. The accommodation area has been constructed with high-quality fiberglass reinforced plastic, similar to metro train coaches.

Hydrogen fuel cell vessels do not use conventional batteries as the primary storage house of electrical energy. The vessels run on hydrogen fuel, which is stored in cylinders. This boat has

five hydrogen cylinders that can carry 40kg of hydrogen and support eight hours of operations. The vessel is also fitted with a 3-kW solar panel.

The hydrogen fuel cell-powered vessel has zero emission, zero noise and is energy-efficient, which makes it more environment-friendly. Since there are no moving parts, the ferry requires less maintenance than combustion vessels.

How do hydrogen fuel cells work?

A hydrogen fuel cell generates electricity by utilising the chemical energy contained in hydrogen. It releases only pure water, not discharging pollutants. Hydrogen is loaded into cells. The energy within the hydrogen is converted into electricity and heat, which is then used to power the vessel's propulsion mechanism. In the fuel cell, the hydrogen reacts with the oxygen in the air to produce electricity. Unlike batteries, hydrogen fuel cells do not require recharging. Provided uninterrupted supply of fuel and oxygen, these cells would work continuously.

What type of cells have been used in the vessel?

This vessel uses a 50-kW PEM (proton-exchange membrane) fuel cell, with Lithium-Ion Phosphate batteries. The advantage is that the cells can quickly change their output depending upon the power demand. PEM fuel cells are popular in automotive applications because they operate at a lower temperature, and are lighter and more compact.

How was it developed?

The vessel has been built completely by the CSL, which also developed the vessel automation system and power management system. The hydrogen fuel cell system was developed by KPIT Technologies, Pune, in collaboration with the Council of Scientific and Industrial Research Labs, under the Union Ministry of Science and Technology.

While hydrogen fuel cell technology has been under development for maritime applications, only a few countries globally have done demonstration projects. This ferry, thus, has given India an early mover advantage to tap the potential of hydrogen as an emerging green fuel in the marine sector.

The 'Harit Nauka' (green boat) initiative of the Ministry of Ports, Shipping and Waterways envisages a green transition of inland vessels. In line with this, the ferry can be replicated in other parts of the country for urban mobility. It is also a boost to the National Green Hydrogen Mission.

What is the Harit Nauka initiative?

In January 2024, the shipping ministry unveiled the Harit Nauka guidelines for inland vessels. As per the guidelines, all states have to make efforts to use green fuels for 50 per cent of inland waterways-based passenger fleets in the next one decade, and 100 per cent by 2045. This is to reduce greenhouse gas emissions as per the Maritime Amrit Kaal Vision 2047.

Globally, the shipping industry is increasingly transitioning to green fuels due to environmental regulations, sustainability goals, and advancements in green fuel technologies. Hydrogen and its derivatives are gaining attention for promising zero-emission fuels for the industry.

Centre launched 2nd part of critical minerals auction

**[#CriticalMineralsAuction](#) [#CompositeLicence](#) [#MiningLicence](#) [#ExplorationLicence](#) [#Minerals](#)
[#Economy](#) [#GS3](#)**

India launched the **second part of its critical minerals auction worth an estimated ₹ 30 lakh crore (about \$362 billion).**

A total of **18 critical mineral blocks, including tungsten, vanadium, cobalt and nickel, will be auctioned in eight states across the country in Chhattisgarh, Madhya Pradesh, Karnataka, Maharashtra, Rajasthan, Andhra Pradesh, Arunachal Pradesh and Tamil Nadu.**

Seventeen mineral blocks have been put up for a composite licence, while one block is for a mining lease. A composite licence includes a licence to examine a block and mine it afterwards.

Maharashtra, Madhya Pradesh, Haryana, Chhattisgarh and Rajasthan will auction blocks for exploration licence of critical minerals, separately.

Cabinet OKs ₹75k cr rooftop solar scheme

#PMSuryaGharYojana #RooftopSolar #RenewableEnergy #Economy #GS3

The Union Cabinet has cleared a ₹75,021-crore rooftop solar scheme under which one crore households in the country will get a subsidy for installation of such units.

The PM-Surya Ghar: Muft Bijli Yojana will offer a subsidy of up to ₹78,000 per household for the installation of solar plants, under which they will get 300 units of free power, the government said.

Through this scheme, households will be able to save electricity bills as well as earn additional income through sale of surplus power to DISCOMs. **A 3-kW system will be able to generate more than 300 units a month on an average for a household.**

The scheme will run for four years — from 2023-24 to 2026-27.

The scheme provides a central financial assistance (CFA) of 60 per cent of system cost for 2 kW systems and 40 per cent of additional system cost for systems between 2 kW and 3 kW capacity; the assistance is capped at 3 kW. At current benchmark prices, this will mean ₹30,000 subsidy for 1 kW plant, ₹60,000 for 2 kW and ₹78,000 for 3 kW systems or higher.

According to a statement issued by the government, **households can apply for subsidy through a national portal launched for the scheme, where they can also select a suitable vendor for installing rooftop solar units.** The portal will offer information about appropriate system sizes, benefits calculator and vendor rating. **Households can register on pmsuryaghar.gov to avail of the benefits.**

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